



Division of Public Health Services

*Office of the Assistant Director
Public Health Preparedness Services*

150 N. 18th Avenue, Suite 120
Phoenix, Arizona 85007
(602) 364-3856
(602) 364-3285 FAX
Internet: www.azdhs.gov

DOUGLAS A. DUCEY, GOVERNOR
CARA M. CHRIST, MD, DIRECTOR

Arizona Vaccine News

Karen Lewis, M.D.
Medical Director

Arizona Immunization Program Office
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VACCINE NEWS

CDC Issues Travel Health Notices for Receipt of Polio Vaccine

- Since November 2015, the Centers for Disease Control and Prevention (CDC) has issued [travel health notices](#) for travelers to Laos, the Ukraine, Guinea, Madagascar, Nigeria, and Burma. These countries have reported cases of vaccine-derived polio.
- Vaccine-derived polio viruses can circulate in areas where oral polio vaccine is used and when there is low polio vaccination coverage. Rarely, it can cause paralytic disease.
- All travelers to the above countries should be fully vaccinated against polio.
- Adult travelers who have previously been fully vaccinated in childhood should receive a single lifetime booster dose of polio vaccine.
- Wild polio has never been eliminated in Afghanistan and Pakistan. Therefore, the above polio vaccination recommendations also apply to travelers to these two countries.

For country-specific vaccine recommendations, see CDC's Travelers' Health [website](#).

2016 Childhood and Adult Vaccine Schedules Have Been Published

- The 2016 [childhood](#) and [adult](#) vaccine schedules are posted on the CDC website.
- Changes in the [childhood](#) and [adult](#) schedules are described in the February 5, 2016 issue of *Morbidity and Mortality Weekly Report* (MMWR).

9vHPV Vaccine Is Now FDA-approved for Males 9-26 Years Old

- Nine-valent human papillomavirus vaccine (9vHPV) is now approved by the Food and Drug Administration (FDA) for use in boys and men 9-26 years of age.
- The current [CDC recommendations for males](#) are for routine use of four-valent HPV vaccine (4vHPV) or 9vHPV in males 9-21 years, or for their use in 22-26 years old who are immunocompromised or who are men who have sex with men.

For more information on 9vHPV, see the updated [package insert](#).

INFLUENZA AND INFLUENZA VACCINES

Children Benefit Immunologically from Two Influenza Doses in Their First Season

- Children who received current season influenza vaccine but who had not received 2 doses of vaccine during a prior season were twice as likely to be sick with influenza A (H3N2) than children who received 2 doses during a prior season.
- During the influenza seasons 2011-2012 and 2012-2013, higher influenza vaccine efficacy estimates occurred among children 2 years through 8 years of age who had received 2 doses of vaccine during a prior season compared to those who had not.

For more information, see the [CDC summary](#) of the study.

FDA Approves First Seasonal Influenza Vaccine with Adjuvant

- Adjuvants are substances that are added to vaccines to increase a person's immunologic response to vaccination.
- A trivalent influenza vaccine with the adjuvant MF59[®] has been approved by the Food and Drug Administration (FDA) for use in patients ≥ 65 years old. Each 0.5 mL dose contains at least 15 mcg of hemagglutinin from influenza A H1N1, influenza A H3N2, and influenza B (Yamagata lineage).
- MF59[®] is a squalene based oil-in-water emulsion. Squalene is a naturally occurring substance found in humans, animals, and plants.

For more information, see the [FDA news release](#) from November 2015 and the [package insert](#).

LITERATURE ON VACCINES AND VACCINE-PREVENTABLE DISEASES

. Predictors of Vaccination Exemptions on the Basis of Personal Belief

- Personal belief vaccine exemptions (PBE) were studied in California schools and communities according to income, education, race, and school characteristics.
- The percentage of students with PBEs doubled from 2007 to 2013, from 1.54% to 3.06%.
- Higher median household income and higher percentage of White race in the population significantly predicted higher percentages of students with PBEs in 2013, but educational attainment was not associated with higher PBEs.
- Higher income, White population, and private school type significantly predicted greater increases in exemptions from 2007 to 2013, whereas higher educational attainment was associated with smaller increases.

See the abstract in the *American Journal of Public Health*, [January 2016](#).

Childhood Vaccine Acceptance and First-Time Expectant Mothers

- Two hundred first-time mothers in their second trimester of pregnancy in 2015 were surveyed as to their vaccine-related knowledge, perceptions, intentions, and information-seeking behavior.
- Seventy-five percent planned to have their child receive all the vaccinations consistent with the recommended childhood immunization schedule. However, most had not received information directly from a primary care provider.
- About 70% indicated they were not familiar with the recommended vaccination schedule and number of routinely recommended vaccines.
- Women who indicated they were planning to delay one or more recommended vaccinations were most likely to rely on Internet searches for childhood vaccine information, rather than information provided by a healthcare professional.

See the article in the *American Journal of Preventive Health*, [December 2015](#).

More Invasive Pneumococcal Disease in Adults when Lower Childhood Vaccine Coverage

- Researchers obtained ZIP code–level data on invasive pneumococcal disease (IPD) from an active population-based surveillance system in Connecticut from 1998–2009, and ZIP code–level data on immunization with at least 3 or at least 4 doses of 7-valent pneumococcal conjugate vaccine (PCV7) from the state immunization registry.
- ZIP codes that had a higher proportion of children that did not complete the 4-dose PCV7 series had a higher proportion of adult IPD cases caused by PCV7 serotypes.

See the abstract in *Journal of Infectious Diseases*, [February 15, 2016](#).

Varicella Vaccination in Perinatally HIV-Infected Children

- Humoral immune responses to varicella vaccine are best achieved and maintained when children with perinatally acquired HIV infection:
 - Receive their first varicella vaccine dose ≥ 3 months after initiation of combined antiretroviral therapy (cART).
 - Continue long-term cART use.
 - Complete the 2-dose varicella vaccine series.

See the abstract in *CID*, [January 1, 2016](#).

Bivalent HPV Vaccine Use Shows Some HPV Cross-Protection and Herd Immunity

- In Scotland in 2008, a national human papillomavirus (HPV) immunization program using a bivalent vaccine against HPV types 16 and 18 was implemented.
- Each year during 2009–2013, the national surveillance program conducted HPV testing on a proportion of liquid-based cytology samples from women receiving their first cervical screening test for cancer.
- By linking vaccination, cervical screening, and HPV testing data, over the study period researchers found a decline in HPV types 16 and 18, significant decreases in HPV types 31, 33, and 45 (suggesting cross-protection), and a nonsignificant increase in HPV 51.
- Also, among nonvaccinated women, HPV types 16 and 18 infections were significantly lower in 2013 than in 2009.
- The results suggest that bivalent HPV vaccine provides some HPV cross-protection and herd immunity.

See the article in *Emerging Infectious Diseases*, [January 2016](#).

Shingles Vaccine Has Efficacy in End-Stage Renal Disease Patients

- Patients with end-stage renal disease (ESRD) can have suboptimal responses to vaccines.
- The effectiveness of zoster vaccine was evaluated by giving 582 ESRD patients ≥ 60 years old a dose of zoster vaccine, and matching them to five unvaccinated patients on age, sex, and dialysis duration.
- The 36-month cumulative risk of developing shingles was 4.1% in the zoster vaccinated patients and 6.6%, in unvaccinated ESRD patients.
- The reduced risk seemed more prominent if the zoster vaccine was given within two years of dialysis initiation.

See the abstract in CID, [February 15, 2016](#).

Vaccine Coverage in United States in 2014 Shows Need for More Adult Vaccinations

- Zoster vaccine in ≥ 60 years old: 27.9%
- Tdap in ≥ 19 years: 20.1%
- Influenza vaccine in ≥ 19 years old: 43.2%; in adults ≥ 65 years old: 61.3%
- Pneumococcal vaccine in high-risk 19-64 years old: 20.3%.
- Pneumococcal vaccine in adults ≥ 65 years old: 61.3%
- Hepatitis A vaccine in ≥ 19 years old: 9.0%
- Hepatitis B vaccine in ≥ 19 years old: 24.5%
- HPV vaccine in 19-26 years old: Females: 40.2%; Males: 8.2%.

For more details, see MMWR (SS-1), [February 5, 2016](#).

DO YOU KNOW?

The Age to Start Giving HPV Vaccine if There Is a History of Sexual Abuse?

- In children with a history of sexual abuse, the CDC recommends that the HPV vaccination series be started at 9 years old.

See MMWR (RR-05), [August 29, 2014, p. 22](#).

Subacute Sclerosing Panencephalitis Is a Vaccine-Preventable Illness

- In 2015, a teenager died in Oregon from subacute sclerosing panencephalitis (SSPE).
- SSPE is a rare and fatal complication from measles infection due to persistent measles virus in the central nervous system.
- The symptoms of SSPE usually appear about 7-10 years after the initial measles infection. SSPE results in progressive neurologic deterioration and inevitable death.
- Vaccination with measles vaccine prevents SSPE by preventing measles infection.

For more information about the clinical and laboratory characteristics of SSPE, see MMWR, [January 15, 2016](#).

RESOURCES

Updated IAC Pneumococcal Vaccine Guidance Document

- The Immunization Action Coalition (IAC) has updated their [document](#) on “Pneumococcal Vaccination Recommendations for Children and Adults by Age and/or Risk Factor” to reflect CDC’s latest recommendations.

Standing Orders Workshop in Phoenix in March 2016 (Free)

- The Immunization Action Coalition has organized workshops nationwide to educate providers as to how to increase adult vaccination rates by using standing orders.
- Each workshop covers: (1) Poor Adult Immunization Rates in the U.S., (2) Standing Orders Protocols, (3) Legal and Regulatory Issues, and (4) How to Implement Standing Orders.
- The workshop will be held on March 17, 2016 at the Renaissance Hotel, 50 E. Adams, Phoenix AZ from 1:00-5:30 p.m.
- Registration is online at <http://www.standingorders.org>.

Clinical Vaccinology Course in Phoenix in March 2016

- The National Foundation for Infectious Diseases and the Emory University School of Medicine is sponsoring a 2 ½ day [conference](#) on new developments and [issues](#) related to the use of vaccines.
- Continuing medical education credits will be available.
- The conference will be held on March 18-20, 2016 at the Renaissance Hotel, 50 E. Adams, Phoenix AZ

Annual Conference of the Arizona Immunization Program Office, April 13-14, 2016

- The 23rd Annual Arizona Immunization Conference, “[Vaccinate for Life](#),” has an exciting line-up of speakers including a medical officer from the CDC, a local pediatrician who spoke in favor of vaccines on Capitol Hill, and a health humorist.
- [Registration](#) is now open.

- Please feel free to distribute ADHS’ *Arizona Vaccine News* to anyone who may be interested. If you wish to unsubscribe, email karen.lewis@azdhs.gov. Past issues of *Arizona Vaccine News* and the Arizona Immunization Program Office’s *Immunications* newsletter are found at <http://www.azdhs.gov/phs/immun/vacNews.htm>.